

The Health Department and Poliomyelitis

Administrative factors in the 1952 outbreak in Wayne and Medina Counties, Ohio

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Wayne and Medina Counties in Ohio have experienced an unprecedented outbreak of poliomyelitis this year. The first case was reported in March, and by September 15 the total number of confirmed cases had mounted to 234, a case rate of 229 per 100,000 population (estimated population of the two counties, July 1, 1952, 102,077). Although it is yet too early to know what the final count will be, it is fair to assume on the basis of existing evidence that the peak of the epidemic has been passed.

Evidence that 1952 would be an epidemic year in these two counties was suggested by the late occurrence of cases in 1951 and the early appearance of cases in 1952. When it became evident that the potential threat implied by these observations was real, a plan of action was set up and has been followed consistently during the entire epidemic.

Alerting the Public

In June, conferences were held with the editors of all newspapers in the two counties for the purpose of explaining the nature of the disease and the health department plans for meeting the impending emergency. As a result,

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the health officials have enjoyed excellent cooperation by the press and the full confidence of a majority of the reading public.

Early in the course of the outbreak, representatives of the Ohio Department of Health were invited to review the situation with local health officials. Their views of the local situation were given wide publicity over the radio and in local newspapers. This measure proved to be of inestimable value in assuring an uneasy populace of the efficacy of measures advocated by the local health departments.

Representatives of the Summit County Chapter of the National Foundation for Infantile Paralysis rushed large quantities of popular literature to the two county health departments, which were distributed by staff nurses to each household where cases occurred and to threatened areas as well. Large quantities of literature were also distributed by village and city councils, service clubs, and other civic organizations, and additional supplies were left in drug and grocery stores.

Early in June a daily radio program was arranged over a local radio station in Wayne County. The program took the form of informal interviews and, where possible, included discussions with visiting officials from the Ohio Department of Health, the National Foundation for Infantile Paralysis, and other professional groups. A concerted effort was made to give the public the facts about the disease and an account of measures being carried out to control it. Fan mail indicated that the programs had a receptive audience.

Meetings were held with each village and city council in the threatened areas and recommendations made concerning control measures. No attempt was made to gloss over the inadequacies of existing methods of control. Inevitably, one or more members of each council would urge that strict quarantine measures be enforced as a means of combating the spread of the disease. In one instance, despite advice to the contrary, officials of a village saw fit to oil all ditches, spray the entire village with DDT, and install sewer tile where open drainage ditches had previously existed in order to satisfy public demand for "positive" action. Needless to say, this village did accomplish things—improvements in sanitation. The fly and mosquito population was reduced in a dramatic manner, and sanitary nuisances associated with sewage disposal were effectively reduced in number. But the progress of the poliomyelitis outbreak was not appreciably affected by these "positive" measures. One of the village officials, who was antagonistic and suspicious of the health department recommendations, became their ardent defender as a consequence of information received at Akron Children's Hospital, where his wife had to be taken—a victim of poliomyelitis. Proclamations issued by the mayors of the cities and towns had a very positive effect on the diffident attitude of many adolescents toward control measures.

Adversely affected by the extensive publicity given poliomyelitis in the newspapers and over radio and television stations were local resorts,

recreational areas, and commercial establishments. One resort owner suffered a 70 percent loss in his summer's business as a result of cancellations. A groceryman was boycotted by his apprehensive customers and forced out of business when his son (and business partner) contracted the disease. Parents were reluctant to engage cottages or let their children attend camps. Plant managers and labor leaders were discouraged from holding picnics at a popular resort in Medina County by employees who feared the consequences of taking their families to large gatherings. Hundreds of telephone calls were received by the departments of public health from anxious parents and frightened individuals who became alarmed over newspaper headlines concerning the prevalence of poliomyelitis in this area. Scores of picnics were canceled, despite statements from the departments of public health that no great hazard existed. Persons living in the Cleveland and Akron areas wanted assurance that they would not contract poliomyelitis as a result of driving through the two counties.

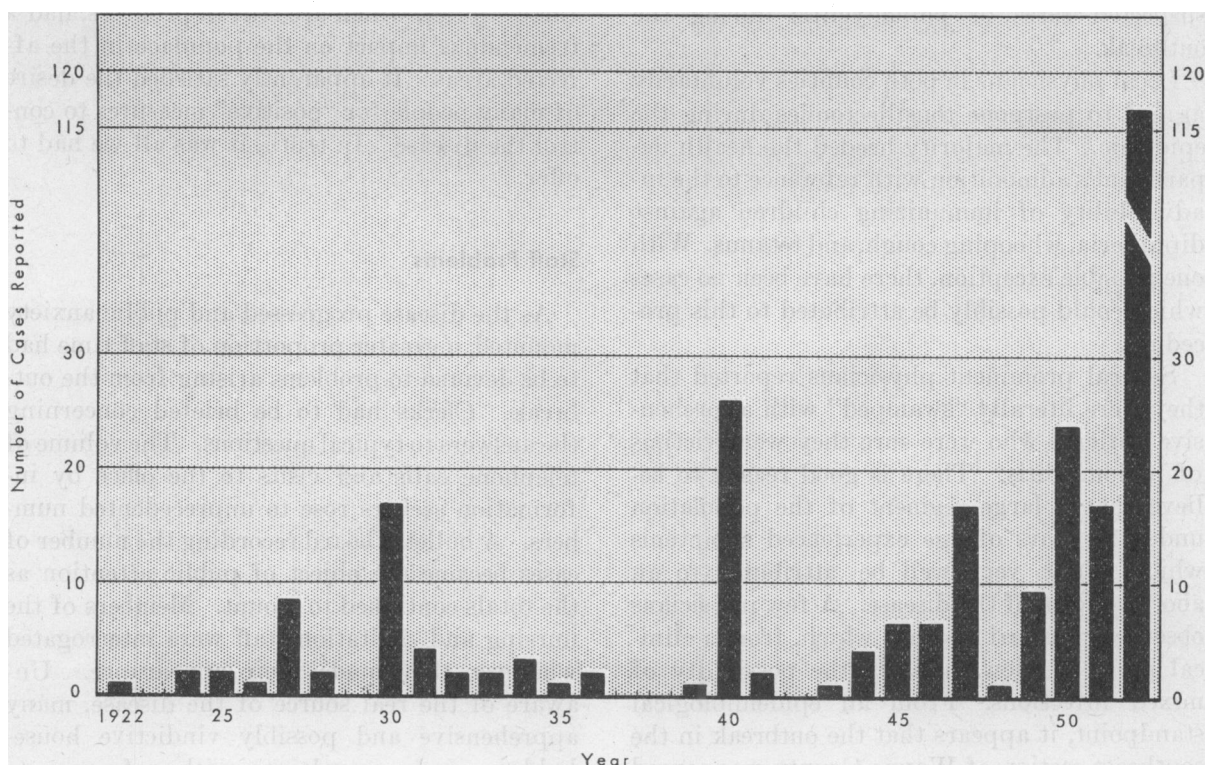
Combating Public Fears

Editors of local newspapers did a remarkably fine job of combating public fear and apprehension through common-sense editorials. Some of those which received wide comment were titled, "Keep Cool, Watch for Polio Symptoms," "The Common Sense Approach," "Don't Fear Polio, Avoid Panic Is Local Physicians

Poliomyelitis morbidity and mortality, Wayne and Medina Counties, 1942-52

Year	Medina County				Wayne County			
	Number cases reported	Case rate per 100,000 population	Number deaths recorded	Death rate per 100,000 population	Number cases reported	Case rate per 100,000 population	Number deaths recorded	Death rate per 100,000 population
1942.....	0	0	0	0	0	0	0	0
1943.....	2	5.6	0	0	1	1.88	0	0
1944.....	7	19.4	0	0	8	14.85	1	1.85
1945.....	7	19.0	0	0	6	10.98	0	0
1946.....	4	10.6	0	0	6	10.82	0	0
1947.....	7	18.0	0	0	17	30.21	1	1.77
1948.....	7	18.0	0	0	1	1.75	0	0
1949.....	10	25.0	0	0	9	15.54	0	0
1950.....	7	17.0	0	0	24	40.87	0	0
1951.....	4	9.7	2	4.75	17	28.56	0	0
1952.....	117	280.42	16	38.34	117	193.85	5	8.20

Cases of poliomyelitis reported in Wayne County, Ohio, 1922-52.



Advice," "Precautions Urged When Polio Has Struck," and "Other Diseases Worse Than Polio." An especially fine editorial, which appeared in the July 11 issue of the *Seville Chronicle*, deserves mention:

Heard Any Good Rumors Lately?

Fear itself is a frightening thing. When you aren't sure what you fear, it becomes hysteria. When persons who really have no fear use the hysteria of others to avoid social and community obligations which have become bothersome, it is little short of criminal.

Yet we have seen children confined to their yards, and public gatherings canceled; we have seen local families shunned because of vicious and unfounded rumors—all because of a mass hysteria about polio. But, as this is being written on Monday, there has not been a single case of poliomyelitis reported in Seville, in Guilford Township, or in any child attending Seville school. Compare that with the rumors you may have heard!

Polio can strike here, but a fear-inspired quarantine which, taken to its natural and insane conclusions would last not just this summer but into the next, and the one after that, and abolish attendance at church and school, will not stop it. Give your child a normal, happy, healthy summer. Observe sensible health precautions . . . and punch anyone in the nose

whom you hear spreading more rumors. You owe it to your children.

Finally, remember, the above advice is written, not by a disinterested observer, not by a misguided publicity seeker, but by the father of an only child, fortunate in that his work enables him to know his child during all her waking hours, vulnerable in his affection for her. And our little girl is going to lead a normal life, maybe learn to swim this summer.

The Medical Profession

When it became evident that poliomyelitis was getting off to an early start with the prospect of an epidemic by midsummer, conferences were held with the presidents of both county medical societies. On recommendation of the district health commissioner a special meeting was called on June 20 to which members of both medical societies were invited. Three prominent speakers outlined the clinical and epidemiological characteristics of the disease. A follow-up memorandum sent to all practicing physicians urged early reporting of cases; in addition, consultation was offered physicians with difficult cases. Questionnaires sent at intervals to practicing physicians

revealed that 72 percent have seen cases or suspected cases of poliomyelitis during the outbreak.

Local physicians in both counties voluntarily agreed to postpone tonsillectomies during the epidemic. The majority heeded the health department's admonition with reference to the inadvisability of immunizing children against diphtheria, whooping cough, and tetanus. With one possible exception, there have been no cases which could possibly be attributed to this procedure.

Several prominent physicians reported that they were literally "swamped" with apprehensive patients who were sure they were victims of poliomyelitis. There is good reason to believe that a large segment of the population under 15 years of age experienced symptoms which might very well be attributed to an abortive form of the disease. A few physicians observed physical findings which, from a clinical point of view, indicate the possibility of mixed infections. From an epidemiological standpoint, it appears that the outbreak in the southeast section of Wayne County was caused by a less virulent virus than that which attacked residents in the northwest section and which later spread to Medina County. The possibility of Cocksackie virus invasion of cases in the southwest section of Medina County seems plausible in view of clinical observations.

Special Studies

Mention has already been made of the invaluable help received from local chapters of the National Foundation for Infantile Paralysis. Another service rendered by that organization was the securing of a research team of experts from Yale University School of Medicine. Two staff members of the section of preventive medicine spent nearly a month in the two counties, obtaining blood and taking throat and fecal swabs of children who were close contacts of cases. This was done for the purpose of studying virus content and obtaining information as to the strain of virus involved.

Supplementing this aspect of the program were epidemiological studies by the staffs of each county department of public health, and an intensive series of studies by members of the

Ohio Department of Health. The initiation of these studies, which are still in progress, had a tremendous impact on the populace in the affected areas. It apparently satisfied the desire of many people for "positive" measures to control the disease. In truth, it was all we had to offer.

Staff Problems

As the disease progressed and public anxiety mounted, a greater proportion of staff time had to be devoted to problems arising from the outbreak. Clerks had to be briefed concerning the answers to typical questions. The volume of telephone calls and visits to the office by information seekers rose to unprecedented numbers. A bulletin board recording the number of cases became the object of public attention as the totals continued to mount. Members of the nursing and sanitation staff were interrogated wherever they made their appearance. Unaware of the real source of the disease, many apprehensive and possibly vindictive householders made complaints with reference to insanitary conditions existing on their neighbor's property. The demand for testing of water samples rose nearly 30 percent.

Shortage of nurses and inability to obtain new staff members during the epidemic posed a serious threat to other public health activities. The maternal, infant, and child health programs had to be practically abandoned, and the tuberculosis clinic in one county had to be closed. The fear of contracting poliomyelitis among adults was practically as great as the fear of contracting tuberculosis, perhaps due in part to the extended publicity given cases and deaths of adults. The local chapters of the National Foundation for Infantile Paralysis tried in vain to recruit volunteers for a "polio lift" to assist parents and afflicted children who required transportation to a hospital for physiotherapy. Whether from fear of the disease or lack of time, it is a fact that few persons offered their services.

School Problems

Several weeks prior to the opening of the schools in September, a memorandum was is-

sued to all school administrators in both counties outlining a course of action with respect to the opening and conduct of the schools in the presence of an outbreak of poliomyelitis. Principles laid down were in accordance with the recommendations of the Ohio Poliomyelitis Advisory Committee and the National Conference on Recommended Practices for the Control of Poliomyelitis held in Ann Arbor, Mich., in June 1949. These bodies, it will be recalled, recommended that schools be opened at the usual time and that they remain open during the course of an epidemic. To justify delaying the opening of schools in those areas where the disease was still rampant, authority was secured from the boards of health in the counties to declare school districts critical areas. Only four school districts, however, were so designated.

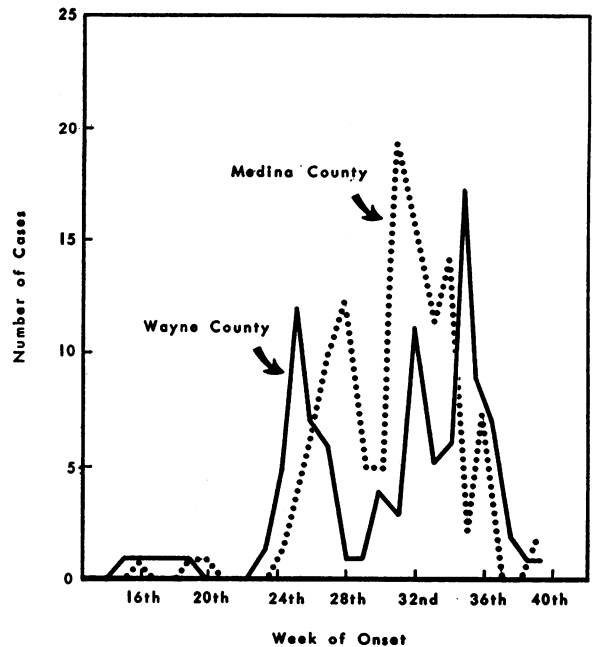
But, despite the announced policy of the boards of health to favor opening of schools on September 3 except in these four areas, public opinion, as expressed by parent-teacher associations and apprehensive alarmists, succeeded in forcing boards of education to delay the opening of all schools in both counties for 2 weeks. Although it is too early to ascertain whether the course of events will justify the stand taken by the boards of health, it is plain that public opinion overwhelmingly favored a delay in the opening of the schools. The public is not quite ready, it seems, to accept the advice of health authorities on this point largely because of our repeated admonition to parents that their children "avoid crowds" and "unnecessary contact with persons other than their usual associates."

Camps, Carnivals, and Fairs

With few exceptions, boys' and girls' camps were avoided by parents of children in both counties. Standard advice by the Ohio Department of Health to parents and camp directors concerning the desirability of keeping camps open had little effect on anxious parents who visualized each child with poliomyelitis as a permanent cripple.

Several prominent organizations had to cancel contracts with carnivals for summer appearances largely because of public pressure.

Poliomyelitis cases by week of onset, Wayne and Medina Counties, Ohio, 1952.



So great was the fear of poliomyelitis that the county fair boards of both counties decided against holding a fair. It was the first time in 103 years that a fair had not been held in Medina County.

Hospitalization and Rehabilitation

Although provision of hospital facilities for the care of poliomyelitis cases does not ordinarily fall in the category of public health administration, it is of utmost importance that public health organizations and hospitals work together in ameliorating the problem. Since the treatment of poliomyelitis is a specialized task requiring the services of different types of medical specialists and special equipment, only well-equipped hospitals can meet such emergencies. Fortunately for residents of Wayne and Medina Counties, the Akron Children's Hospital accommodated all patients sent there by local physicians.

As patients were discharged from the hospital, it became apparent that a serious deficiency existed in the over-all program. Parents were failing to return afflicted children to the hospital for physiotherapy. In Wayne County this situation had been anticipated, and, with

the help of funds from the National Foundation for Infantile Paralysis, it was possible to increase the time of a physiotherapist in the county sufficiently to cope with the increased demand for her services. At a joint meeting held at the Akron Children's Hospital September 5, it was agreed to set up treatment centers in Wayne, Medina, and adjacent counties where patients discharged from the hospital could receive the treatment indicated by the Akron physician in charge of the case. Once a month after release the child is to be returned to the hospital for a review of his case. This plan of decentralization is being tried; it remains to be seen whether parents will cooperate any better now that the travel involved has been effectively reduced.

Aggressive Educational Program

Every health department confronted with an epidemic of poliomyelitis finds itself the object of criticism by well-meaning but ill-advised "experts." Public opinion as expressed by these individuals can be damaging. In our opinion the best defense against such individuals and the half-truths which they occasionally succeed in getting before the public is an aggressive educational program. While it is plainly evident that our best efforts at informing the public concerning desirable procedures did not always succeed, we are convinced that, had we not done so, the results might have been still more hazardous.

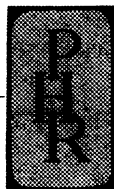
It has been aptly said that every poliomyelitis epidemic comprises actually two diseases, poliomyelitis and hysteria. It takes a strong personality to tell the public, in the face of increasing numbers of cases, that medical science has not yet devised an effective control program, and the capacity of a field general to face a room full of hysterical parents and tell them to lead a normal existence during the progress of an epidemic.

With a few possible exceptions, the public has cooperated unusually well with the public health officials. Village and city officials have also given excellent cooperation. Despite the fact that a county-wide quarantine was invoked in a neighboring county, the boards of health in Wayne and Medina Counties have shown no inclination to do likewise. Instead, they have supported the contention of the health officer that responsibility for the spread of the disease rests primarily on the shoulders of parents. Child contacts have, however, been uniformly quarantined by health department officials for a period of 7 days from the last exposure.

Of considerable interest in this particular outbreak has been the extent to which the people have subscribed to poliomyelitis and hospitalization insurance. Approximately 50 percent of all hospital admissions in both counties were covered by poliomyelitis insurance; approximately 15 percent had hospitalization insurance. By virtue of this situation, the burden of the National Foundation for Infantile Paralysis was appreciably lessened.

Conclusion

The modern department of public health has a very real job to perform in meeting the problems of a poliomyelitis epidemic. Through the medium of community organization, it can alert the public to the nature of the disease and the available means for combating it. Public health workers must be prepared to assume the initiative in formulating a community-wide program; they must also be prepared to accept the responsibilities and the criticisms that go with the establishment of the program. Finally, it should be emphasized that control of poliomyelitis, including treatment and rehabilitation, is a cooperative enterprise, involving a host of agencies, all of which are essential in a successful program.



Ideas

Maplewood Dental Plan

MAPLEWOOD, N. J. How to handle a small number of dentally indigent school children without the overhead of a full-scale dental clinic is the problem.

Solution. The school medical department refers all cases of suspected or alleged dental indigency to the public health nurse who investigates the family's eligibility for dental care according to a family income scale approved by the New Jersey Dental Society. Children of eligible families are then referred to any one of the 16 local dentists of their choice, all of whom participate in the plan. The dentist, after inspection, estimates the work needed and its cost at a stipulated hourly rate. Upon approval of the estimate by the health officer, the dental work is completed, and the dentist is paid from funds provided by the Maplewood Service League, a women's civic organization.

Advantages. The plan's cost is a small percentage of the cost of maintaining clinic facilities. The plan eliminates any stigma of indigency which may be attached by some to clinic attendance. It encourages the children to continue going to the dentist of choice when their parents can again afford the service. It encourages parents who plead inability to pay, but who are ineligible under the plan, to provide overdue dental care at their own expense.

The plan was developed by the Maplewood Health Department, the board of education, and the local dental society.

Small Mobile Unit

MISSISSIPPI. A mobile unit has been designed, weighing 7 tons instead of the original 11 tons, to reach remote areas in the State for chest X-ray surveys when bridges on second- and third-class roads will not

carry the weight of the larger mobile chest X-ray unit.

The Mississippi State Board of Health purchased a 2-ton truck chassis with cab and had the body constructed to meet essential requirements for its X-ray equipment. The truck with the body complete, as shown in the picture, cost approximately \$4,000, and is considerably more economical to operate and maintain than the older and larger mobile unit.



The inside measurements are: width, 7 feet, 1 inch; length, 13 feet; height, 6 feet, 4 inches. Doors for entrance and exit are both on the right side (as in the larger unit) and are 26 inches wide. There are two built-in steps and one removable step for each door. The body has an inside lining of half-inch plywood. The floor has a plastic covering which carries a 15-year guarantee, does not require waxing, and is not sensitive to oil.

The equipment is arranged to provide a suitable desk for the clerk near the entrance at the rear of the bus and ample room for the technician to perform his duties.

Union's Health Circuit

PENNSYLVANIA. The mobile health survey program of the International Ladies' Garment Workers' Union brings the services of a permanent health center to outlying shop units.

The service was developed over the past 5 years by Dr. James Bloom, medical director of the union's health and welfare department for central and western Pennsylvania. It is a variation of the multiple health screening technique.

A team of two medical technicians, carefully trained in the taking of medical histories, make the rounds of scattered units of the union's con-

stituency. One is a medical case worker, and the other is a clinical laboratory technician. Together, they interview and test 10 to 12 workers daily. Union members are interviewed at their factories in private rooms set aside for the purpose. No physical examination is given, however.

Laboratory tests include: blood pressure, pulse rate, urinalysis, complete blood count, and additional determinations of sedimentation rate or blood sugar, if advisable. Visual adequacy is determined by a telebinocular apparatus.

Histories and laboratory reports are evaluated by the medical director, who reports significant findings to the worker's family physician. Reported participation is good—from 68 to 81 percent of workers in 89 shops. At the completion of two circuits, more than 13,000 patients had been seen, 5,338 significant abnormalities revealed, and 762 physicians contacted.

The program, with its emphasis on skillful interviewing for medical history, supported by laboratory values, has placed a large number of persons with previously unrecognized disease under medical care and, at the same time, has conserved medical manpower.

Sanitation Self-Rater

SAN DIEGO, CALIF. Owners and managers of eating and drinking establishments can determine whether they are providing their employees with essential guidance and materials.

A self-rating form has been devised by the local public health department to give conscientious supervisory personnel an opportunity to check themselves on their own attitudes, policies, and sanitation practices.

Not an inspection form and not for rating the performance of other personnel, the self-rater is intended solely for the supervisor. It covers the training of personnel, provision of adequate materials and suitable equipment, delegation of authority, provision of wholesome food, adequate utensil sanitization, and effective vermin and rodent control.